

VERSION WITH MARKINGS TO SHOW CHANGES MADE IN THE CLAIMS:

The title of the application has been amended as follows:

[APPARATUS] SYSTEMS FOR FORMING LIGHTWEIGHT CONCRETE BLOCK

Claims 47-54, 56-68 and 70-72 have been amended as follows:

47. (Twice Amended) A system [An apparatus] for forming lightweight concrete building units, comprising:

at least one mold configured for receiving a batch of a lightweight cement slurry therein and for forming at least one building unit;

an ingredient measuring apparatus configured for measuring each of a plurality of ingredients to form the batch;

a cement slurry mixing apparatus configured for receiving the plurality of ingredients from the ingredient measuring apparatus, for mixing the plurality of ingredients into the batch, and for pouring the batch into at least one mold, wherein said cement slurry mixing device comprises a vessel rotatably mounted proximate a longitudinal axis thereof to a support frame and including a first drive motor coupled thereto for rotating said vessel to dump a batch contained therein and a second drive motor coupled to said vessel for rotating mixing paddles within said vessel and mixing the batch contained therein; and

a slurry delivery apparatus configured for transporting said cement slurry mixing apparatus to a position proximate said at least one mold so that the batch slurry can be delivered from said cement slurry mixing apparatus to said at least one mold.

48. (Amended) The [apparatus] system of claim 47, wherein said mold is configured for compressing the batch contained therein when said batch is in slurry form.

49. (Amended) The [apparatus] system of claim 48, wherein said mold is configured for compressing the batch to form at least one building unit having relatively precise dimensions.

50. (Amended) The [apparatus] system of claim 48, wherein said mold further includes means for heating said mold to increase the rate of cure of the batch of cement slurry contained therein.

51. (Amended) The [apparatus] system of claim 47, wherein said ingredient measuring apparatus further comprises a plurality of hoppers for receiving a plurality of separate dry ingredients.

52. (Amended) The [apparatus] system of claim 51, wherein each of said plurality of hoppers further comprises a plurality of discharge control mechanisms proximate a bottom of each of said plurality of hoppers for selectively controlling the discharge of the separate dry ingredients from each of said plurality of hoppers.

53. (Amended) The [apparatus] system of claim 52, wherein each of said discharge control mechanism comprises a plate slidably engaged with an opening in the bottom of each of said plurality of hoppers and an actuator coupled that can be extended and retracted coupled to said plate to slide said plate relative to said opening to selectively open, partially open and close said opening.

54. (Amended) The [apparatus] system of claim 52, further including a weighing hopper comprising an electronic scale for receiving the separate dry ingredients from each of said plurality of hoppers and weighing each of the plurality separate dry ingredients until a desired weight is reached.

56. (Twice Amended) The [apparatus] system of claim 47, wherein said cement slurry mixing device further includes an elongate spout which extends along a substantial length of said vessel for dispensing the batch when the vessel is rotated with said first motor.

57. (Amended) The [apparatus] system of claim 56, wherein said spout is attached to said vessel proximate to and around a perimeter of an opening formed therein and wherein said spout is tangentially offset relative to the vessel.

58. (Amended) The [apparatus] system of claim 47, wherein said slurry delivery apparatus comprises an overhead truss and a motor driven wheel/track assembly, said cement slurry mixing device being attached to said overhead truss, said overhead truss movable by said motor driven wheel/track assembly for moving said truss and positioning said mixing device in alignment with said at least one mold.

59. (Amended) The [apparatus] system of claim 47, further including a computer for controlling the operation of each of said at least one mold, said ingredient measuring apparatus, said cement slurry mixing apparatus, and said slurry delivery apparatus.

60. (Amended) The [apparatus] system of claim 51, further comprising a foam generator for generating a foam and including a line that exits between openings of said plurality of hoppers of said ingredient measuring apparatus for dispensing the foam into the cement slurry mixing apparatus.

61. (Amended) The [apparatus] system of claim 50, wherein said means for heating comprises a hot water source for supplying heated water to said mold for circulation there through and for supplying heated water to the cement slurry mixture for each batch thereof.

62. (Twice Amended) [An apparatus] A system for forming lightweight concrete building units, comprising:

a plurality of molds, each configured for receiving a batch of an aerated cement slurry therein and forming a plurality of building units from each batch;

an automated ingredient measuring apparatus configured for weighing each of a plurality of dry ingredients to form a batch;

a foam generator for feeding a metered amount of foam for each batch;

a water source for supplying a metered amount of water for each batch;

a vessel positionable beneath said measuring apparatus configured for receiving the plurality of dry ingredients from the automated ingredient measuring apparatus, the foam from said foam generator and the water from said water source, said vessel having mixing paddles therein for mixing the plurality of dry ingredients, the foam and the water into a batch of lightweight cement slurry, wherein said vessel is rotatably mounted proximate a longitudinal axis thereof to a support frame and includes a first drive motor coupled thereto for rotating said vessel to dump a batch contained therein and a second drive motor coupled to said vessel for rotating said mixing paddles; and

a slurry delivery apparatus associated with said vessel capable of delivering a batch of lightweight cement slurry to each of said plurality of molds.

63. (Amended) The [apparatus] system of claim 62, wherein said plurality of molds are arranged in at least one row, said vessel being movable from beneath said measuring apparatus to a desired mold in said row for delivery of a batch.

64. (Amended) The [apparatus] system of claim 62, wherein each of said plurality of molds is configured for compressing a batch contained therein when the batch is in slurry form.

65. (Amended) The [apparatus] system of claim 65, wherein each of said plurality of molds is configured for compressing the batch to form building units having relatively precise dimensions.

66. (Amended) The [apparatus] system of claim 66, wherein each of said plurality of molds further includes means for heating said mold to a temperature that causes the foam to collapse in a layer of the batch that contacts the mold to form an outer, more dense layer of concrete in each building unit.

67. (Amended) The [apparatus] system of claim 62, wherein said ingredient measuring apparatus further comprises a plurality of hoppers, each for receiving a separate dry ingredient and each including a discharge control mechanism for selectively controlling the discharge of the dry ingredient from each.

68. (Amended) The [apparatus] system of claim 67, further including an electronic scale for receiving the separate dry ingredients from each of said plurality of hoppers and weighing each of the plurality separate dry ingredient until desired weight is reached for each.

70. (Amended) The [apparatus] system of claim 62, wherein said vessel further includes an elongate spout extending along a substantial length of said vessel for dispensing a batch when the vessel is rotated with said first motor, said spout being tangentially offset relative to said vessel.

71. (Amended) The [apparatus] system of claim 62, further including a computer for controlling the operation of each of plurality of molds, said ingredient measuring apparatus, said foam generator, said water source, said vessel, and said slurry delivery apparatus.